1. [illegible] [illegible]

(1) [illegible] e [illegible] 1.60×10 [illegible] ^{19} C [illegible]

[illegible]______[illegible]. [illegible]

(2) [illegible]

[illegible].

[illegible] + [illegible]

2. [illegible]

(1) [illegible]

[illegible]____________.

(2) [illegible]________[illegible].

(3) [illegible]____________.

(4) [illegible]____________[illegible]

[illegible]________[illegible]________.

[illegible]

1. [illegible]

[illegible] ______ [illegible] ______ [illegible] ______ [illegible] ______ [illegible] ______ [illegible].

2. [illegible]

$F = k\frac{q_1q_2}{r^2}$ [illegible] k [illegible] ______9.0×10⁹______ $N\cdot m^2/C^2$ [illegible].

[illegible]

3. [illegible]

[illegible] ______ [illegible] ______ [illegible].

(1) [illegible].

(2) [illegible].

4. [illegible]

[illegible] ______ [illegible] ______ [illegible].

[illegible]

[illegible]

1. [illegible]

(1) [illegible]

(2) [illegible]__________. [illegible]

2. [illegible]

(1) [illegible] F [illegible] q [illegible].

(2) [illegible] $E=\frac{F}{q}$

(3) [illegible]__________[illegible].

3. [illegible] Q [illegible] r [illegible] $E=k\frac{Q}{r^2}$.

[illegible]

1. [illegible]________[illegible]________[illegible]________[illegible]________.

2. [illegible].

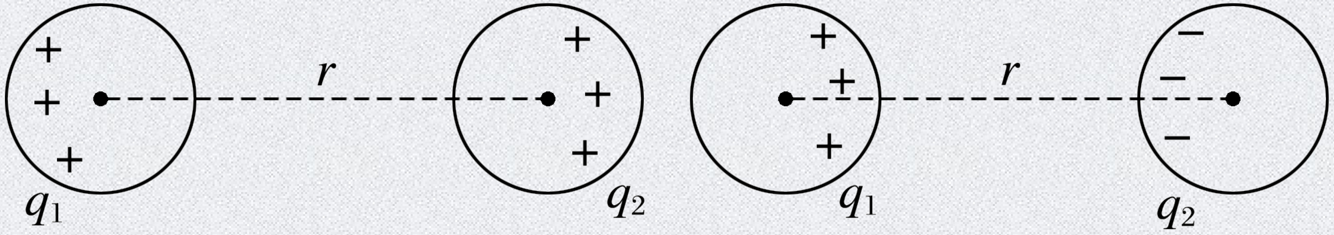
3. [illegible]______[illegible]______.

□□□□ □□□□□□□□□□□

1. □□□□□□□□□□□□□□□□□□□□□□.

2. □□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□ r □□□□□□□.

3. □□□□□□□□□□□□□□□□□□□□□□□□□□□□.

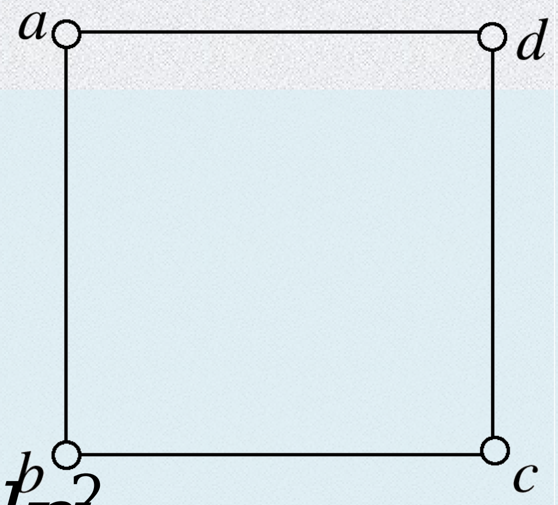


(1)□□□□□ F□ $k\frac{q_1q_2}{r^2}$□ (2)□□□□□ F□ $k\frac{q_1q_2}{r^2}$.

4. □□□□□□□□□□□□ $r\to0$ □□□□□ $F\to\infty$ □□□□ $r\to0$ □□□□□□□□□□□□□□□□□.

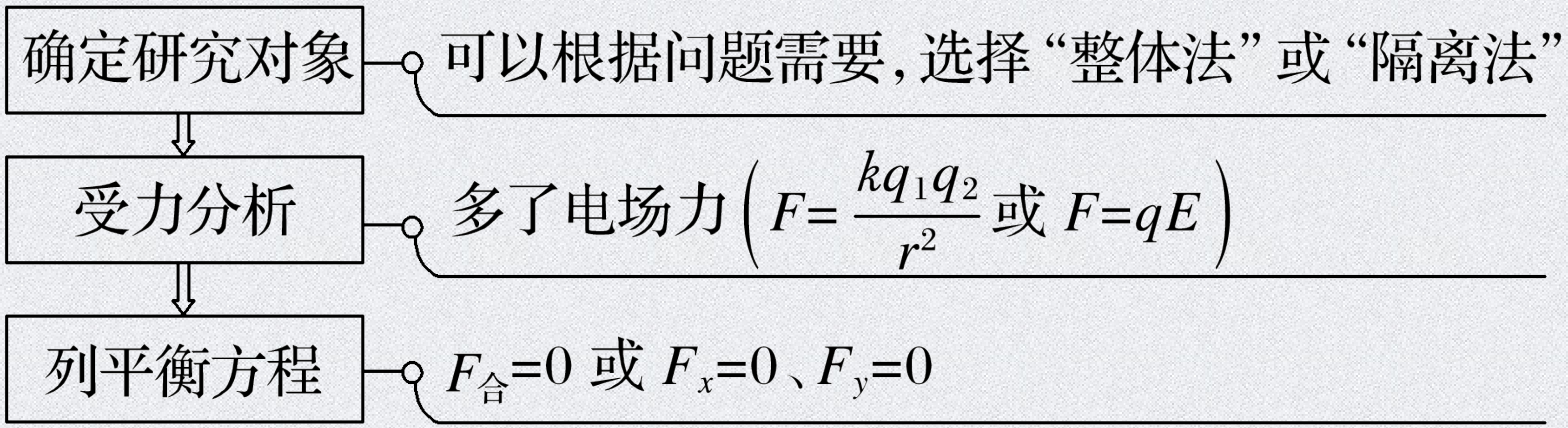
[illegible] l [illegible] a [illegible] b [illegible] q [illegible] c [illegible] d [illegible] q. [illegible] a [illegible]

[illegible]



A. 0　　B. $\frac{\sqrt{2}kq^2}{l^2}$　　C. $\frac{kq^2}{l^2}$　　√ D. $\frac{3kq^2}{2l^2}$

1.



确定研究对象
可以根据问题需要，选择“整体法”或“隔离法”
受力分析
多了电场力$\left(F=\frac{kq_1q_2}{r^2}\text{或}F=qE\right)$
列平衡方程
$F_{合}=0$或$F_x=0$、$F_y=0$

2.

.

[illegible] P [illegible] Q [illegible]

[illegible]

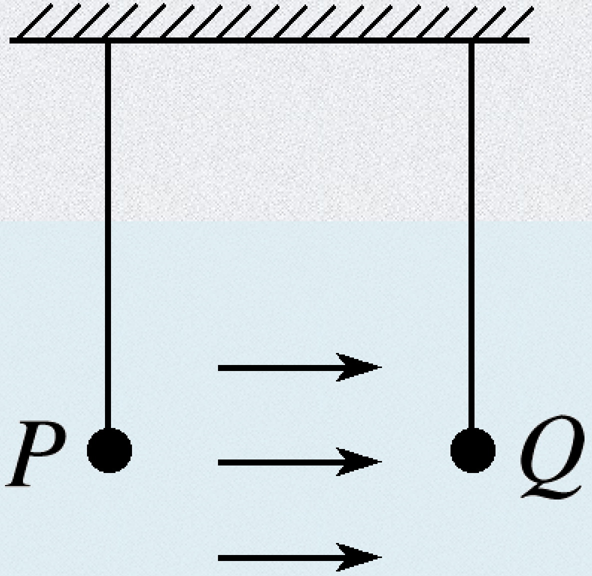
A. P [illegible] Q [illegible]

B. P [illegible] Q [illegible]

C. P [illegible] Q [illegible]

D. P [illegible] Q [illegible]

√



[illegible] [illegible]

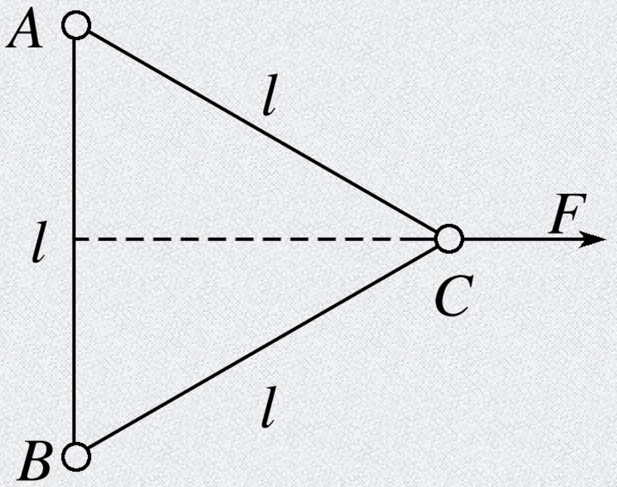
[illegible] m [illegible] A [illegible] B [illegible] C [illegible] l [illegible] A [illegible] q. [illegible] C [illegible] F [illegible] F [illegible] A [illegible] B [illegible]. [illegible] k [illegible]

A. B[illegible] $2q$

√ B. C[illegible] $2q$

√ C. [illegible] $\dfrac{\sqrt{3}kq^2}{ml^2}$

D. [illegible] F [illegible] $\dfrac{2\sqrt{3}kq^2}{l^2}$

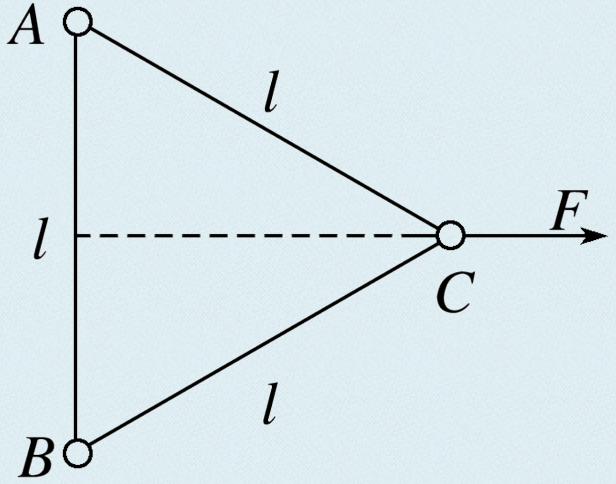


□□□□□□□□□□ A □□□□□□ B □□□□□□□□□ A □□□

□ C □□□□□□□□ q_C □□ A □□□□□□□

B□□A□□□□□□□F_{BA}□$\frac{kq^2}{l^2}$□

C□□A□□□□□□□F_{CA}□$\frac{kqq_C}{l^2}$□



□□□□□□□□□□□□□□□□ F □□□□□□□

□□□ $F_{CA}\sin 30°$ □ F_{BA} □ $F_{CA}\cos 30°$ □ ma □

□□□q_C□$2q$□a□$\frac{\sqrt{3}kq^2}{ml^2}$□

C □□□□□□ C □□□□□□□ $2q$ □□ B □ C □□□

□□□□□□□□□□□□□

□□□□□□□□□□□F□$3ma$□$\frac{3\sqrt{3}kq^2}{l^2}$□□ D □□.

1. [illegible]

(1) [illegible]

(2) [illegible] E [illegible] q [illegible]

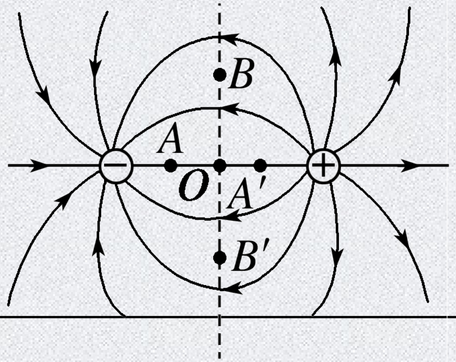
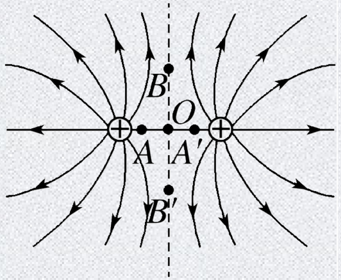
[illegible] ([illegible]) [illegible]

(3) [illegible]

[illegible].

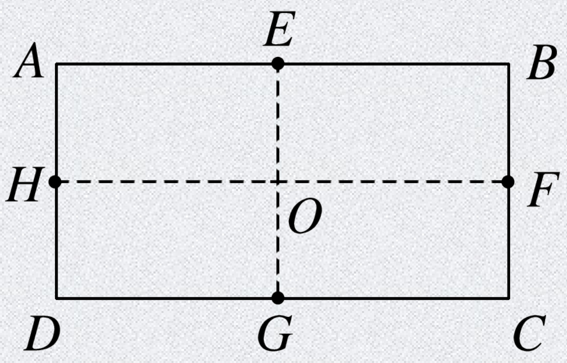
2. [illegible]

[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	$E=\frac{F}{q}$	[illegible]	[illegible] q [illegible]
[illegible]	$E=k\frac{Q}{r^2}$	[illegible]	E [illegible] Q [illegible] r [illegible]
[illegible]	$E=\frac{U}{d}$	[illegible]	d [illegible]

[illegible]	[illegible]	[illegible]
[illegible]		
[illegible] O [illegible]	[illegible] O [illegible]	[illegible]

[illegible] ([illegible])	[illegible]	[illegible]
[illegible] O [illegible]	O [illegible]	O [illegible]
A [illegible] A' B [illegible] B' [illegible]	[illegible]	[illegible]

□ □□□□□ E □ F □ G □ H □□□ $ABCD$ □□□□□□ O □ EG □ HF □□□□ AB □□□□□ d.E □ G □□□□□□□□□□□□□□□□□□□□ Q □□□□□□□ H □□□ F □□□□□□□□□□□ . □□ H □□□□□□□ O □□□ F □□□□□□□□□□□□ (□□□□□□ k)



A. $\frac{4kQ}{d^2}$□ □ □ □ □

B. $\frac{4kQ}{d^2}$□ □ □ □ □

C. $\frac{3kQ}{d^2}$□ □ □ □ □

√ D. $\frac{3kQ}{d^2}$□ □ □ □ □

$$k\frac{4Q}{d^2}-k\frac{Q}{d^2}=k\frac{3Q}{d^2}$$

□□□□□□□□□□□MN□□□□□□□□□Q□□□□□□□□□□□□

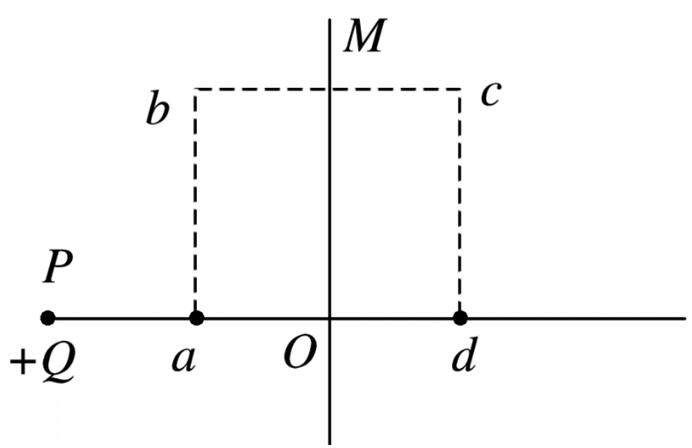
□□□□□□□□□MN□□□□□□□□□□□□Q□□□□□□Q□□□

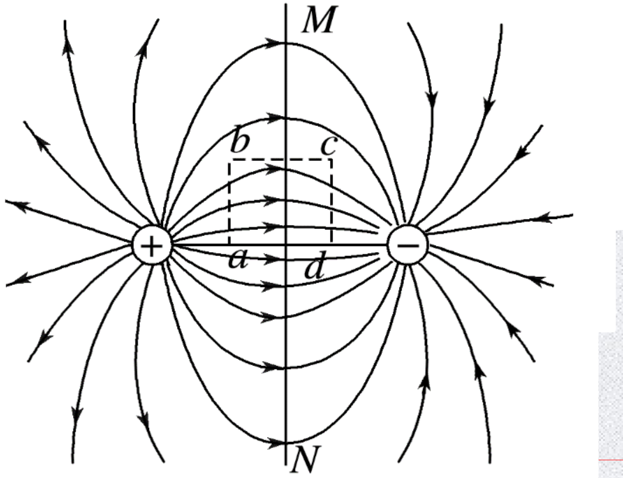
□□□□.□□□□Q□□□□□□□□□□□□□□□□□□Q□□□□□□

□□□.□□□□□□□□Q□□□□P□□□□□MN□□□□L□a

□OP□□□□$abcd$□□□□L□□□□□□□ab□□□□$MN.$□

□□





A.a□ □ □ □ □ □ □ □ □ E□$4k\frac{Q}{L^2}$

□□□□□□□□□□□□so□□□□

√B.a□□□□□□□□□□b□□□□□□□□

□□□□□□□□

C.b□□□□□□□c□□□□□□□□

□□□□□□□□□□□□□□

D.□□□□□□□□a□□□□□d□□□□□□□□

□□□□□□□□□

[illegible]

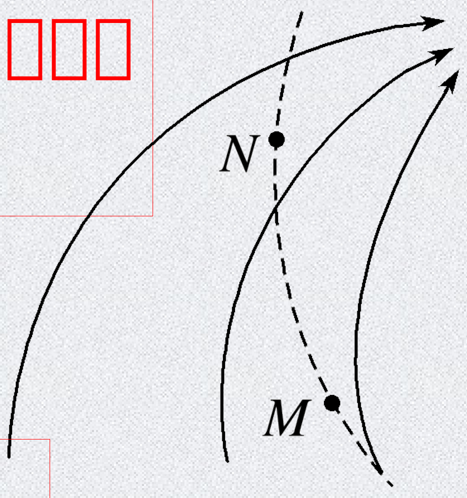
M [illegible] N [illegible]. [illegible]

A. M [illegible] N [illegible] $E_M>E_N$

B. [illegible] M [illegible] N [illegible] $a_M>a_N$

C. [illegible] M [illegible] N [illegible] $v_M>v_N$ √

D. [illegible]



[illegible] E [illegible] a [illegible]

[illegible] F [illegible] ma [illegible]

[illegible] + [illegible]

[illegible]

C [illegible]